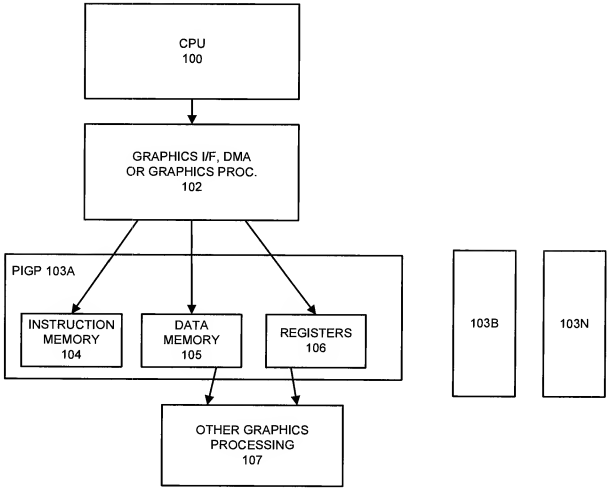
CPU
100
GRAPHICS I/F, DMA
OR GRAPHICS PROC.
102
PIGP 103A
INSTRUCTION
MEMORY
104
DATA
MEMORY
105
REGISTERS
106
103B
103N
OTHER GRAPHICS
PROCESSING
107

FIG. 1

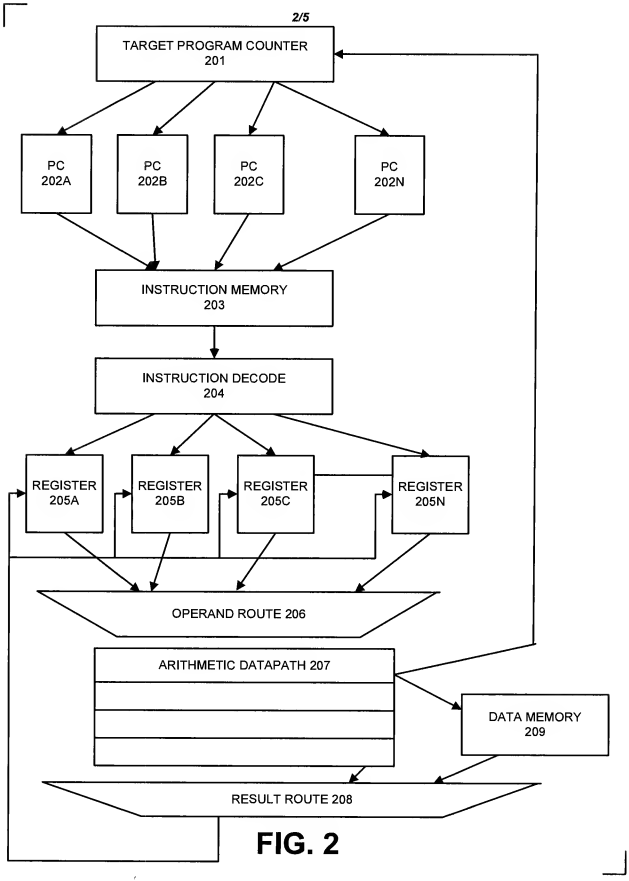
2/5
TARGET PROGRAM COUNTER 201
PC 202A
PC 202B
PC 202C
PC 202N
INSTRUCTION MEMORY 203
INSTRUCTION DECODE 204
REGISTER 205A
REGISTER 205B
REGISTER 205C
REGISTER 205N
OPERAND ROUTE 206
ARITHMETIC DATAPATH 207
DATA MEMORY 209
RESULT ROUTE 208

FIG. 2

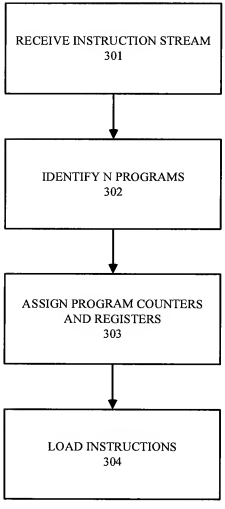
RECEIVE INSTRUCTION STREAM
301
IDENTIFY N PROGRAMS
302
ASSIGN PROGRAM COUNTERS AND REGISTERS
303
LOAD INSTRUCTIONS
304

FIG. 3

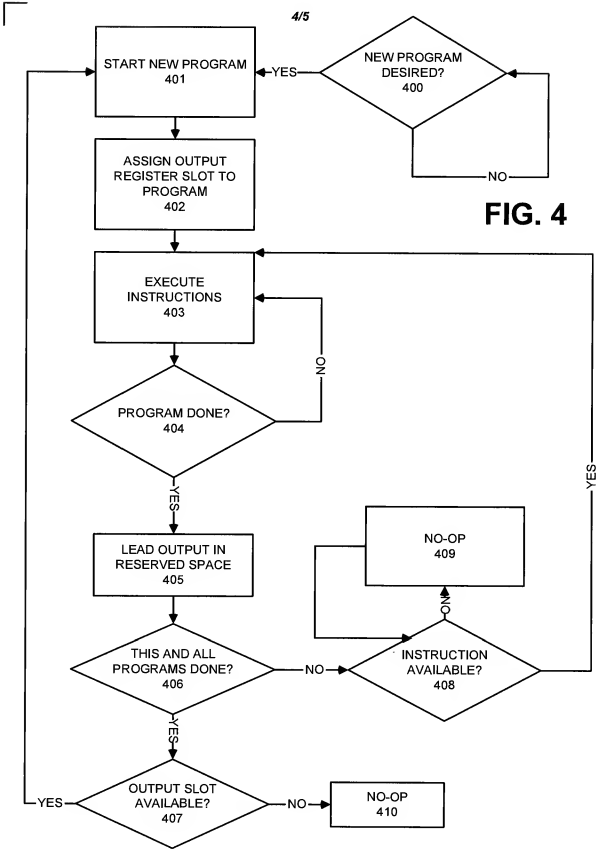
START NEW PROGRAM
401
YES
NEW PROGRAM DESIRED?
400
NO
ASSIGN OUTPUT REGISTER SLOT TO PROGRAM
402
EXECUTE INSTRUCTIONS
403
NO
PROGRAM DONE?
404
YES
LEAD OUTPUT IN RESERVED SPACE
405
NO-OP
409
NO
THIS AND ALL PROGRAMS DONE?
406
NO
INSTRUCTION AVAILABLE?
408
YES
YES
OUTPUT SLOT AVAILABLE?
407
YES
NO
NO-OP
410

FIG. 4

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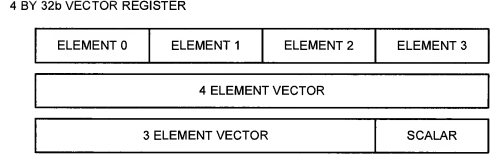
4 BY 32b VECTOR REGISTER
ELEMENT 0
ELEMENT 1
ELEMENT 2
ELEMENT 3
4 ELEMENT VECTOR
3 ELEMENT VECTOR
SCALAR

FIG. 5

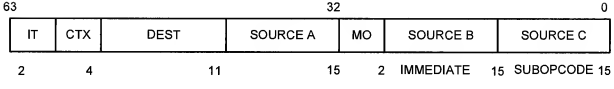
63
32
0
IT
CTX
DEST
SOURCE A
MO
SOURCE B
SOURCE C
2
4
11
15
2
IMMEDIATE
15
SUBOPCODE
15

FIG. 6